Specifications—Sonicator® Plus 940

General Specifications:

|	
Input:	120 V ∿ 60 Hz, 85 VA (domestic)
	100-240 V ∿ 50 Hz, 95 VA (export)
ETL and C-ETL Listed:	Model ME 940
Weight:	11 pounds
Dimensions:	4.9 in (H) x 13.6 in (W) x 10.5 in (D)
Maximum Treatment Time:	60 minutes–electrical stimulation
	30 minutes–ultrasound or combination therapy
Treatment Timer:	Treatment time counts down to zero. The digital timer indicates time in minutes and seconds. The timer also indicates the remaining treatment time during the "Hold" period.

Ultrasound Specifications:

Frequency:	1.0 MHz
	3.0 MHz
Modes:	Continuous
	Pulsed—5, 10, 20, 30, 40 and 50% duty cycle
Pulse Repetition Rate:	100 Hz
Pulse Duration:	0.5, 1, 2, 3, 4 and 5 msec
Temporal Peak/ average intensity ratio:	20:1, 10:1, 5:1, 3.3:1, 2.5:1 and 2:1
Maximum output power:	11 W (100%) with large applicator, 1 MHz, (ME 9401)
	16.5 W (pulsed) with large applicator, 1 MHz, (ME 9401)
	12 W (100%) with large applicator, 3 MHz, (ME 9401)
	18 W (pulsed) with large applicator, 3 MHz, (ME 9401)
	1.8 W (100%) with small applicator, 1 or 3 MHz, (ME 9402)
	2.7 W (pulsed) with small applicator, 1 or 3 MHz, (ME 9402)
Maximum intensity:	2.0 W/cm² (100%)
	3.0 W/cm² (pulsed mode)
Indication accuracy:	±20% (for any level above 10% of maximum)

Individual Applicator Specifications:

Applicator Part Number	Frequency	Effective Radiating Area	Maximum Beam Non-Uniformity Ratio	Type
ME 9401	1 MHz	5.5 cm²	4.6:1	Collimated
ME 9401	3 MHz	6.0 cm²	4.2:1	Collimated
ME 9402	1 MHz	0.9 cm²	4.7:1	Divergent
ME 9402	3 MHz	0.9 cm²	4.7:1	Collimated

Electrical Stimulation Specifications:
4-Pole Interferential Mode
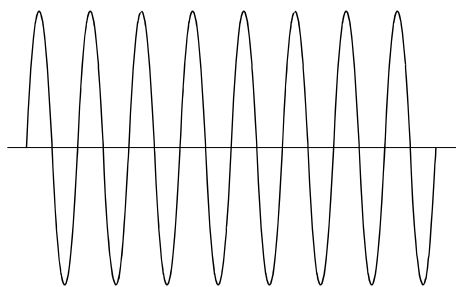
4-Pole Interferential Waveform

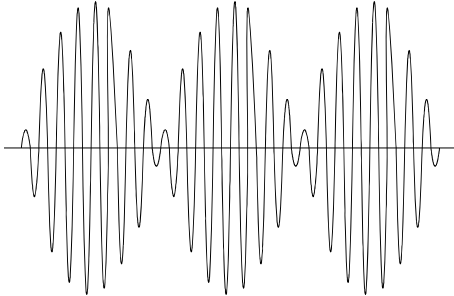|	
Waveform Type:	Sinewave
Polarity:	None
Maximum Voltage:	50 V (Peak value, 500Ω load)
Current:	0–100 mA peak, 500Ω load
Carrier Frequency:	2 kHz, 4 kHz, 5 kHz
Interference frequency	1~250 beats
Frequency Modulation:	1 to 10 in 1-beat steps, and 10 to 250 in 10-beat steps.
Vector sweep angle:	0, 15, 30, 45 degrees
Available Channels:	Channels 1 & 2 or 3 &4

2-Pole Interferential (Premodulated)

2-Pole Interferential Waveform

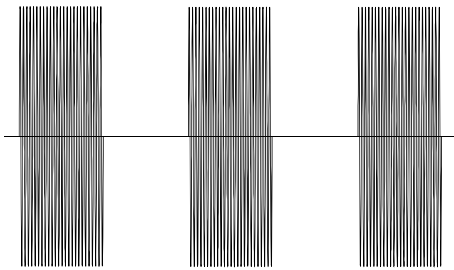|	
Waveform Type:	Amplitude modulated sine wave
Polarity:	None
Maximum Voltage:	50 V (Peak value, 500Ω load)
Current:	0–100 mA peak, 500Ω load
Carrier Frequency:	2 kHz, 4 kHz, 5 kHz
Interference frequency	1~250 beats
Frequency Modulation:	1 to 10 in 1-beat steps, and 10 to 250 in 10-beat steps.
Available Channels:	All

EMS Mode

EMS Waveform

Waveform Type:	Amplitude modulated sine wave
Polarity:	None
Maximum Voltage:	50 V (Peak value, 500Ω load)
Current:	0–100 mA peak, 500Ω load
Carrier Frequency:	2 kHz, 4 kHz, 5 kHz
Interference frequency	20 to 250 beats in 10 beat steps
Amplitude Modulation Options:	Independent, Simultaneous, Alternate
On-time	1 to 30 sec (In 1-sec steps)
Off-time	1 to 99 sec (In 1-sec steps)
Ramp-up Time	0 to 3 sec (In 0.5-sec steps)
Hold Time	0 to 30 sec (In 0.5-sec steps)
Ramp-down time	0 to 3 sec (in 0.5-sec steps)
Contraction	1 to 999 times
Available Channels:	All

Russian Mode

Russian Waveform

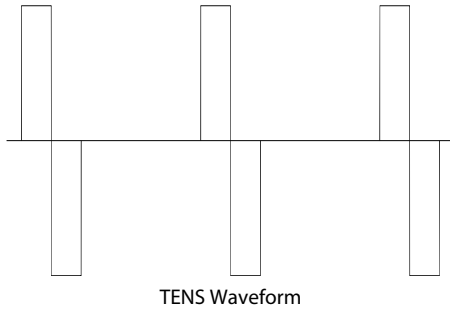|	
Waveform Type:	Burst modulated sine wave
Polarity:	None
Maximum Voltage:	50 V (Peak value, 500Ω load)
Current:	0–100 mA peak, 500Ω load
Frequency:	2500 Hz, Burst at 10 ms on and 10 ms off
Available Amplitude Modulation Options:	Independent, Simultaneous, alternate
On-time	1 to 30 sec (In 1-sec steps)
Off-time	1 to 99 sec (In 1-sec steps)
Ramp-up Time	0 to 3 sec (In 0.5-sec steps)
Hold Time	0 to 30 sec (In 0.5-sec steps)
Ramp-down time	0 to 3 sec (in 0.5-sec steps)
Contraction	1 to 999 times
Available Channels:	All

Hi Volt Mode
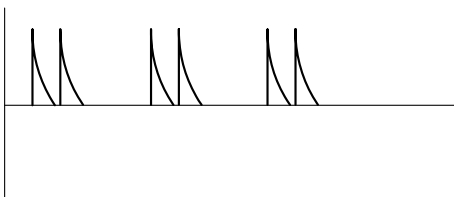
Hi Volt Waveform

Waveform Type:	Monophasic twin peak
Polarity:	Positive, negative or both
Voltage:	0 to 150 V (Peak value, 500Ω load)
Maximum Current:	300 mA peak, (Peak value, 500Ω load)
Phase Duration:	10 to 80 µs (In 10-µs steps)
Frequency:	Constant : 0.5 to 200 Hz Burst: 60 Hz (Fixed) Sweep : 1 to 200 Hz
Independent, Simultaneous, Alternate:	20 to 200 Hz
Frequency Modulation:	Constant, Burst, Sweep
Burst frequency *2	0.5 to 7 Hz (0.5, 0.7 Hz, 1 to 7 Hz (In 1-Hz steps)).
Available Amplitude Modulation Options:	Independent, Simultaneous, Alternate
On-time *1	1 to 30 sec (In 1-sec steps)
Off-time *1	1 to 99 sec (In 1-sec steps)
Ramp-up time *1	0 to 3 sec (In 0.5-sec steps)

Hold time *1	0 to 30 sec (In 0.5-sec steps)
Ramp-down time *1	0 to 3 sec (In 0.5-sec steps)
Contraction *1	1 to 999 times
Available Channels:	All

*1: May be set only in Independent, Simultaneous, or Alternate mode.
*2: This frequency to be set only in Burst mode.

TENS Mode

TENS Waveform

Waveform Type:	Biphasic square	
Polarity:	None	
Maximum Voltage:	50 V (Peak value, 500Ω load)	
Current:	0 –100 mA peak, 500Ω load	
Phase Duration:	50 to 300 µs (In 10-µs steps)	
Frequency:	Constant :	0.5 to 250 Hz
	Burst:	100 Hz (Fixed)
	Sweep :	1 to 250 Hz
	Independent, Simultaneous, Alternate:	20 to 250 Hz
Frequency Modulation:	Constant and Sweep	
Burst frequency *2	0.5 to 7 Hz (0.5, 0.7 Hz, 1 to 7 Hz (In 1-Hz steps)).	
Available Amplitude Modulation Options:	Burst, Independent, Simultaneous, Alternate	
On-time *1	1 to 30 sec (In 1-sec steps)	
Off-time *1	1 to 99 sec (In 1-sec steps)	
Ramp-up time *1	0 to 3 sec (In 0.5-sec steps)	
Hold time *1	0 to 30 sec (In 0.5-sec steps)	
Ramp-down time *1	0 to 3 sec (In 0.5-sec steps)	
Contraction *1	1 to 999 times	
Available Channels:	All	

*1: May be set only in Independent, Simultaneous, or Alternate mode.
*2: This frequency to be set only in Burst mode.

Microcurrent Mode

Microcurrent Waveform
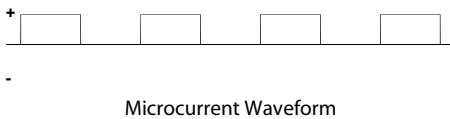
Waveform Type:	Mono- or Bi-phasic square
Polarity:	Plus, minus or both
Maximum Voltage:	0.4 V (Peak value, 500Ω load)
Current:	0 to 750 µA peak, 500Ω load
Phase Duration:	Duty fixed at 50%
Frequency:	0.3 to 400 Hz
Available Channels:	All

Direct Current Mode

Waveform Type:	Continuous DC
Polarity:	Plus or minus
Maximum Voltage:	10 V (500Ω load)
Current:	0 to 20 mA peak, 500Ω load
Available Channels:	All

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